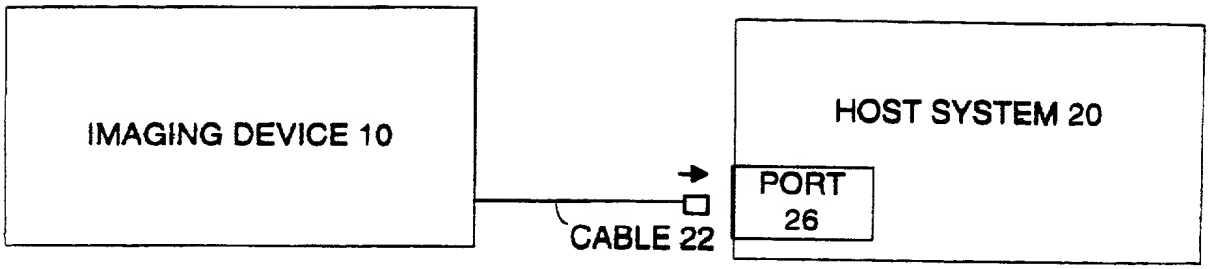

FIG. 1

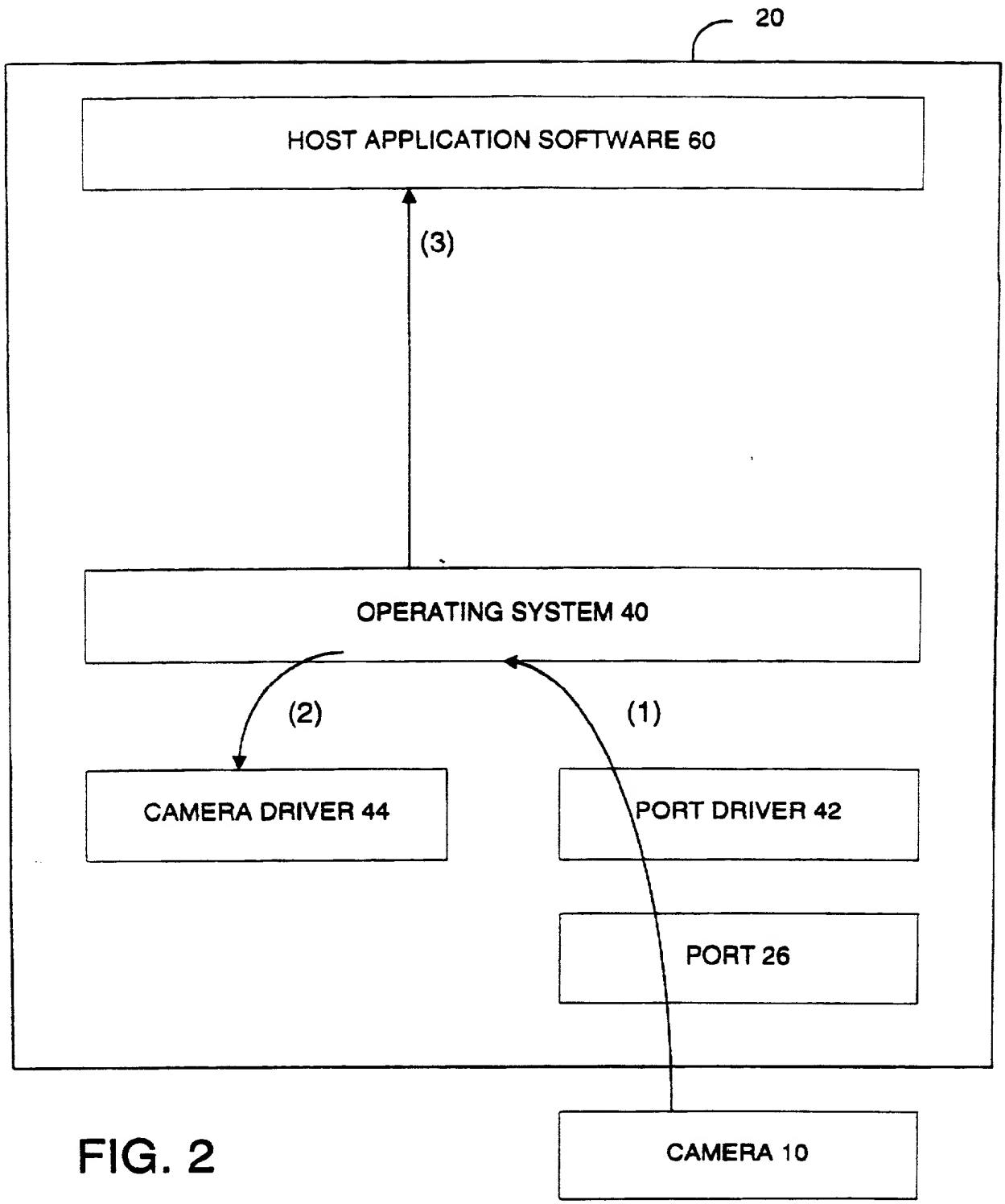
20
HOST APPLICATION SOFTWARE 60
(3)
OPERATING SYSTEM 40
(2)
(1)
CAMERA DRIVER 44
PORT DRIVER 42
PORT 26
CAMERA 10

FIG. 2

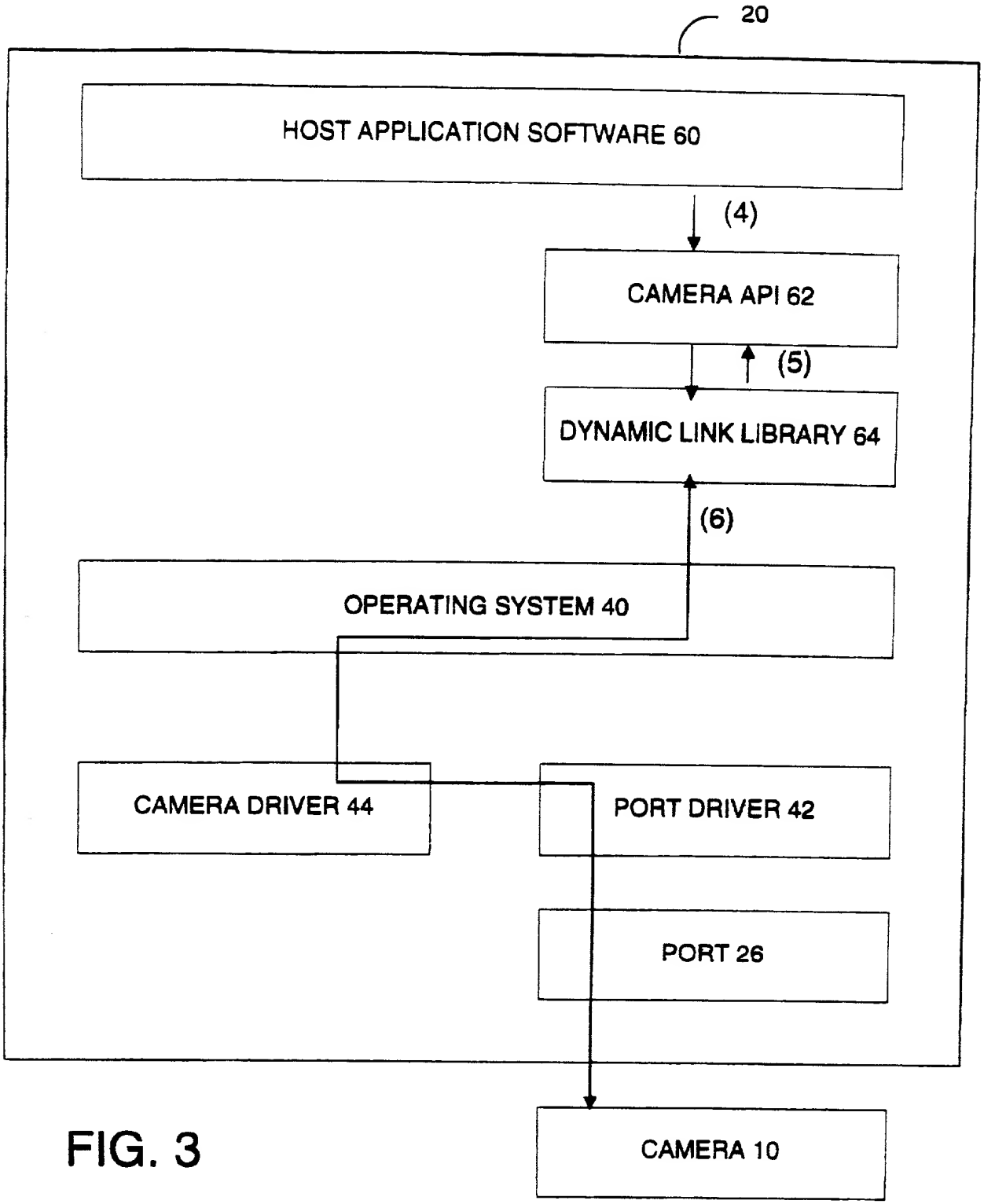
20
HOST APPLICATION SOFTWARE 60
(4)
CAMERA API 62
(5)
DYNAMIC LINK LIBRARY 64
(6)
OPERATING SYSTEM 40
CAMERA DRIVER 44
PORT DRIVER 42
PORT 26
CAMERA 10

FIG. 3

OPERATING SYSTEM	HOST APPLICATION S/W	CAMERA API
Open Host Application S/W →	Create and Initialize CameraAPI →	Reset internal variables
	→	Load O/S dependent DLLs
	→	Create & start backgrd thread
	→	Insert a CM_SIGNAL_STATUS message into backgrd-threaded queue
	Add main window to CameraAPI's callback list	

FIG. 4

CAMERA API		HOST APPLICATION SOFTWARE
CM_SIGNAL_STATUS		
If Camera is not Open		
If OpenDriver() succeeds		
Close Driver()		
If message has not been sent before		
Signal all callback windows	→	**WM_CAMERAAPI_STATUS**
		If Message is CM_IS_CONNECTED
CM_OPEN_DRIVER	←	OpenDriver()
Open camera driver		
Check for compatible camera		
CM_GET_NO_OF_IMAGES	←	Get number of images
Returns number o f images on camera		
CM_GET_IMAGE_LIST	←	If number of images > 0
Returns list of image names and sizes		Get Image List
CM_GET_IMAGE_BY_NAME	←	Download images. one-by-one
Returns image with given name		

FIG. 5

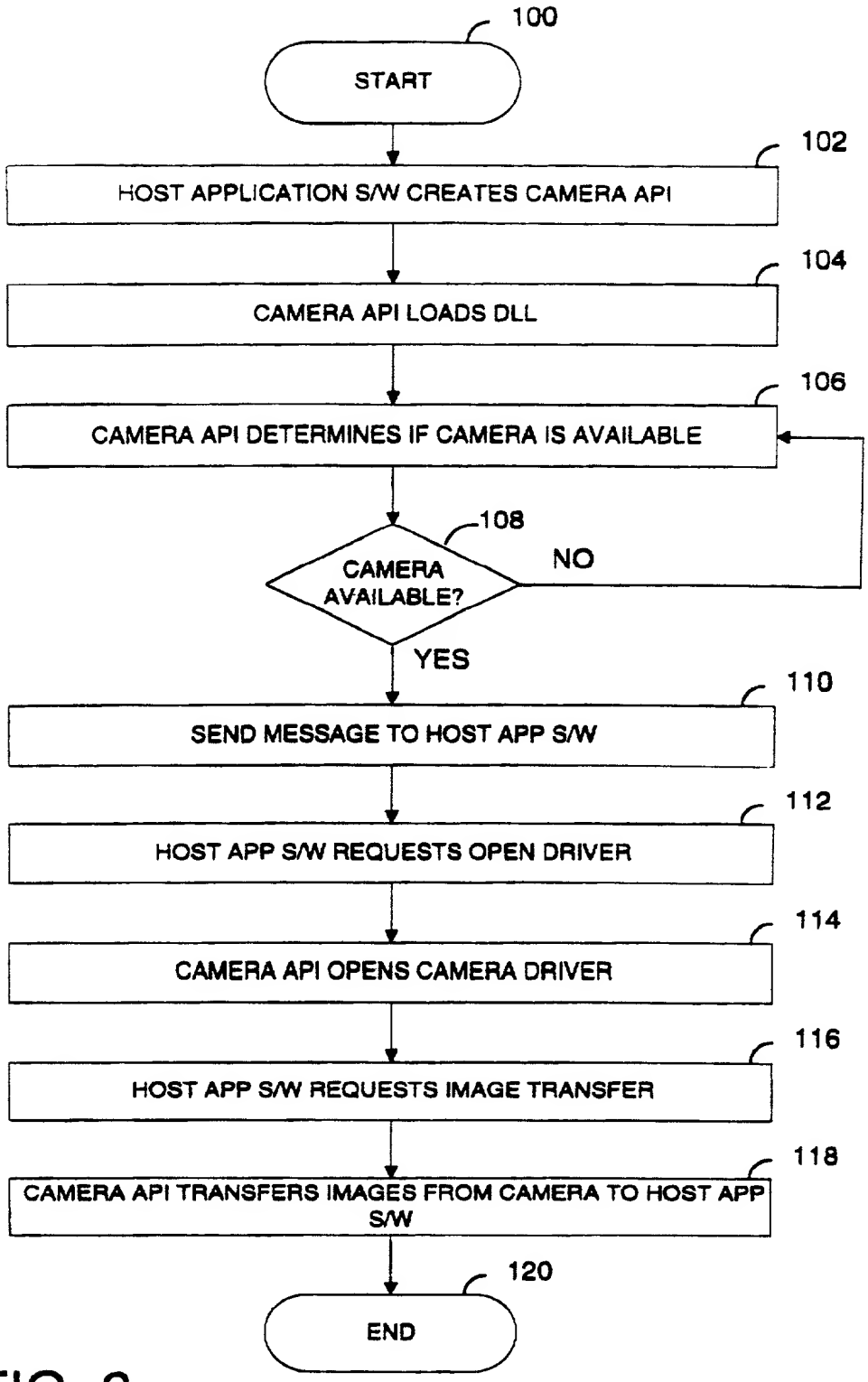
100
START
102
HOST APPLICATION S/W CREATES CAMERA API
104
CAMERA API LOADS DLL
106
CAMERA API DETERMINES IF CAMERA IS AVAILABLE
108
CAMERA AVAILABLE?
NO
YES
110
SEND MESSAGE TO HOST APP S/W
112
HOST APP S/W REQUESTS OPEN DRIVER
114
CAMERA API OPENS CAMERA DRIVER
116
HOST APP S/W REQUESTS IMAGE TRANSFER
118
CAMERA API TRANSFERS IMAGES FROM CAMERA TO HOST APP S/W
120
END

FIG. 6

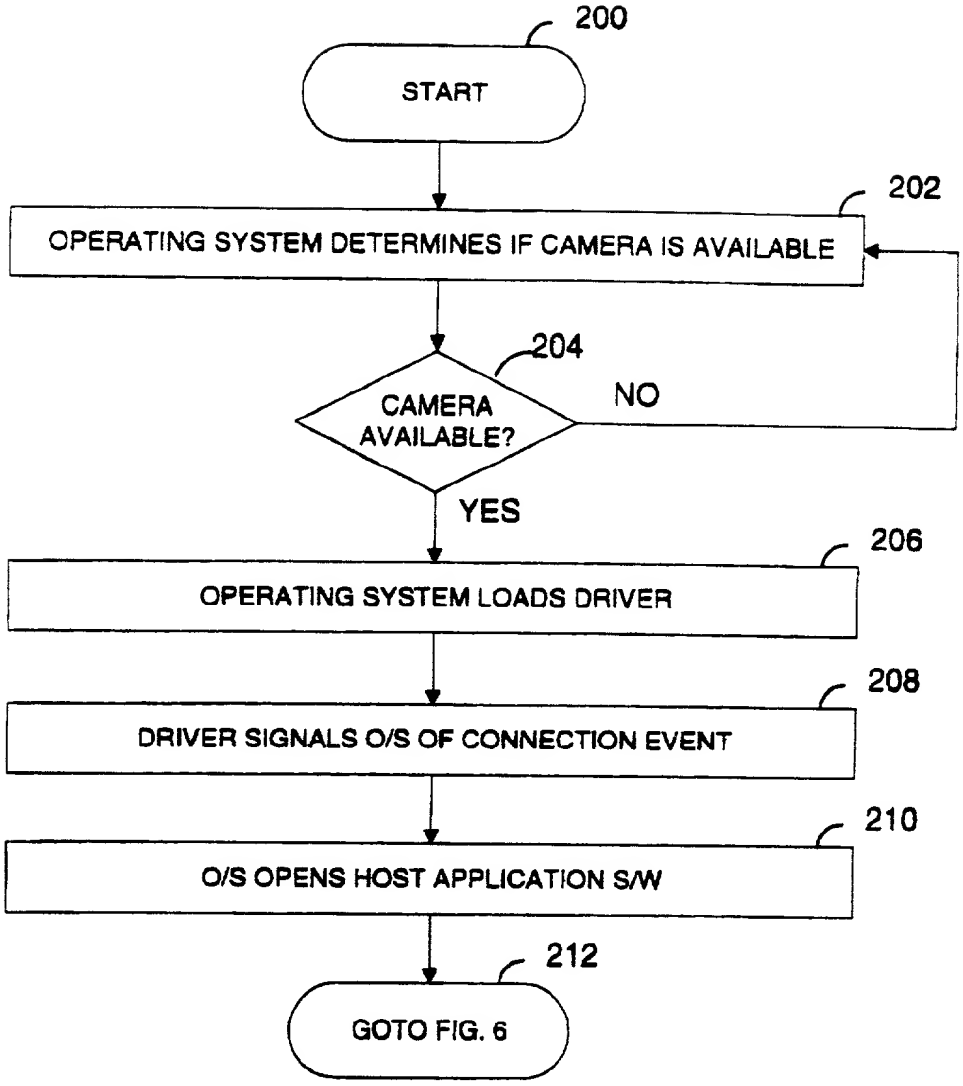
200
START
202
OPERATING SYSTEM DETERMINES IF CAMERA IS AVAILABLE
204
CAMERA AVAILABLE?
NO
YES
206
OPERATING SYSTEM LOADS DRIVER
208
DRIVER SIGNALS O/S OF CONNECTION EVENT
210
O/S OPENS HOST APPLICATION S/W
212
GOTO FIG. 6

FIG. 7